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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/957,472	09/21/2001	Tetsuya Hanamoto	204552021500	4058
25227	7590	10/12/2006		
MORRISON & FOERSTER LLP 1650 TYSONS BOULEVARD SUITE 300 MCLEAN, VA 22102			EXAMINER JACKSON JR, JEROME	
			ART UNIT 2815	PAPER NUMBER

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/957,472	Applicant(s) HANAMOTO ET AL.	
	Examiner Jerome Jackson Jr.	Art Unit 2815	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 157-162, 185-189, 191-195 and 216-220 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 157-162, 185-189, 191-195 and 216-220 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 157-162, 185-189, 191-195 and 216-220 are rejected under 35

U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The new limitation "only 390-420" does not have exact antecedent basis in the specification as "only" is not anywhere disclosed, and furthermore, it is unclear whether applicant has actually enabled such a device. The emission spectrum of a diode generally is spread over a range of wavelengths even though in a direct bandgap material as GaN the majority of emission is centered around the bandgap energy. There is no exact description of the exact device applicant would use to provide such "only 390-420" emission other than stating a device based on GaInAlN, or ZnSe, or SiC material. Such broad sweeping statement is vague at best and does not clearly support enablement or antecedent basis.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 157-162, 185-189, 191-195 and 216-220, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Vriens in view of the Phosphor Handbook, Vecht and Komoto, of record .

The previous rejection with the above comments applies. The new limitations, while considered new matter, do not distinguish over the teachings of the prior art applied because Vriens states wavelengths below 390 nm are to be avoided because of the detrimental effect on the resins and to humans. Also Vriens shows in embodiments 3 and 7 bandpass filters to reflect any uV back into the device for reabsorption by the phosphor. Likewise blue wavelengths below the desired blue phosphor wavelength are also reflected similar to the uV. See column 5 lines 1-15 in particular. Accordingly, it would have been prima facie obvious to have engineered a GaN uV emitter emitting above 390 nm and below the phosphor blue emission wavelength based on the device emission properties desired in Vriens.

Applicant has stated 390-420 nm emission as the most desired. These wavelengths are stated to have low visibility. Applicant also states that the blue phosphor can emit from 410-480, which overlaps the 390-420 range. See page 15 of the specification. Accordingly 420 should be in the "blue" part of the spectrum which it is.

Vriens suggests above 390 and below phosphor blue. Accordingly Vriens suggests a solid state GaN based emission device ideally emitting from 390-410 nm or 390-below the blue phosphor emission (410-480). The new claim limitations are obvious

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to one of ordinary skill. Note also the applied art suggests the blue phosphor emitter formulas claimed which are well known in the phosphor art.

Applicant's arguments filed 6/27/06 have been fully considered but they are not persuasive. Applicant states that Vriens suggests emission wavelengths outside 390-420 nm. While this may be true, Vriens also states that uV/blue GaN based emitters preferably emit above 390 nm and below the blue phosphor emission wavelength (below 410-480 nm). Such a GaN based device would be ideal for the solid state emitter of Vriens based on his bandpass filter teachings. The majority of the GaN emission in the Vriens device is obviously somewhere in the above 390 to [410-480 blue] nm range according to the specification and filter design. The emissions outside this range are undesired and hence the bandpass filtering. Nonetheless, a perfect emitter would obviously not emit in these undesired wavelengths. Applicant does not have enough disclosure to enable such a perfect emitter. There is also no exact antecedent for "only" and such language appears to infer a perfect emitter.

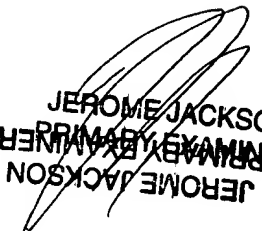
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerome Jackson Jr. whose telephone number is 571-272-1730. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ken Parker can be reached on 571-272-2298. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jj


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